

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-21. (Canceled)

22. (Currently Amended) A method for handling a communication in a network **of nodes, each node having an associated identification that is unique from other identifications in the network of nodes**, the method comprising:

receiving, at a first node, a communication from a second node, wherein the communication includes an identification;

determining, at the first node, whether the identification included in the communication is closer to, equidistant from, or further from a predetermined **identification** value than an identification associated with the first node;

if the identification included in the communication is closer to the predetermined **identification** value than the identification associated with the first node, sending, from the first node to a third node, a communication including the identification **that was included in the communication received from the second node associated with the first node**;

if the identification included in the communication is further from the predetermined **identification** value than the identification associated with the first node, sending, from the first node to a third node, a communication including the identification **associated with the first node that was included in the communication received from the second node**; and

if the identification included in the communication is equidistant from the predetermined **identification** value as the identification associated with the first node, concluding that a loop exists in the network.

23. (Previously presented) The method of claim 22, wherein the first, second, and third nodes are repeaters.

24. (Previously presented) The method of claim 23, wherein the identification associated

with the first node is a hardware address of a network device coupled to the first node.

25. (Previously presented) The method of claim 24, wherein the network device is a switch.

26. (Previously presented) The method of claim 24, wherein the network device is a gigabit Ethernet switch.

27. (Previously presented) The method of claim 24, wherein the hardware address is a media access control (MAC) address.

28. (Previously presented) The method of claim 22, further comprising, if the identification included in the communication is equidistant from the predetermined value as the identification associated with the first node, appointing the first node as a master loop breaker.

29. (Currently Amended) A method for detecting a loop in a network of devices, at least a plurality of the devices being capable of transmitting and reading auto-negotiate messages using a communication protocol supported by the plurality of devices, each auto-negotiate message being characterized by a plurality of fields, each field being represented by a number of bits, the method comprising:

sending a loop detect message from a first device to a second device in the plurality of network ~~of~~ devices, wherein the loop detect message includes the same number of fields as an auto-negotiate message, each field of the loop detect message including the same number of bits as an associated field in the auto-negotiate message is substantially similar in length to an auto-negotiate message in a protocol supported by the first device and the second device.

30. (Previously presented) The method of claim 29, further comprising, in a field in which an auto-negotiate message would ordinarily have a first content according to the protocol, placing a second content identifying the message as a loop detect message.

31. (Previously presented) The method of claim 29, wherein the first and second devices are repeaters coupled to network switches.

32. (Previously presented) The method of claim 30, wherein the protocol is a Gigabit Ethernet protocol.

33. (Currently Amended) An apparatus for handling a communication in a network of nodes, each node having an associated identification that is unique from other identifications in the network of nodes, the apparatus comprising:

one or more components configured to:

receive, at a first node, a communication from a second node, wherein the communication includes an identification;

determine, at the first node, whether the identification included in the communication is closer to, equidistant from, or further from a predetermined identification value than an identification associated with the first node;

if the identification included in the communication is closer to the predetermined identification value than the identification associated with the first node, send, from the first node to a third node, a communication including the identification that was included in the communication received from the second node associated with the first node;

if the identification included in the communication is further from the predetermined identification value than the identification associated with the first node, send, from the first node to a third node, a communication including the identification associated with the first node that was included in the communication received from the second node; and

if the identification included in the communication is equidistant from the predetermined identification value as the identification associated with the first node, conclude that a loop exists in the network.

34. (Previously presented) The apparatus of claim 33, wherein the first, second, and third nodes are repeaters.
35. (Previously presented) The apparatus of claim 34, wherein the identification associated with the first node is a hardware address of a network device coupled to the first node.
36. (Previously presented) The apparatus of claim 35, wherein the network device is a switch.
37. (Previously presented) The apparatus of claim 35, wherein the network device is a gigabit Ethernet switch.
38. (Previously presented) The apparatus of claim 35, wherein the hardware address is a media access control (MAC) address.
39. (Previously presented) The apparatus of claim 33, wherein the one or more components are further configured to, if the identification included in the communication is equidistant from the predetermined value as the identification associated with the first node, appointing the first node as a master loop breaker.
40. (Currently Amended) An apparatus for detecting a loop in a network of devices, at least a plurality of the devices being capable of transmitting and reading auto-negotiate messages using a communication protocol supported by the plurality of devices, each auto-negotiate message being characterized by a plurality of fields, each field being represented by a number of bits, the apparatus comprising:
- one or more components configured to send a loop detect message from a first device to a second device in the plurality of network ~~of~~ devices, wherein the loop detect message includes the same number of fields as an auto-negotiate message, each field of the loop detect message including the same number of bits as an associated field in the auto-

negotiate message is substantially similar in length to an auto-negotiate message in a protocol supported by the first device and the second device.

41. (Previously presented) The apparatus of claim 40, wherein the one or more components are further configured to, in a field in which an auto-negotiate message would ordinarily have a first content according to the protocol, place a second content identifying the message as a loop detect message.

42. (Previously presented) The apparatus of claim 40, wherein the first and second devices are repeaters coupled to network switches.

43. (Previously presented) The apparatus of claim 41, wherein the protocol is a Gigabit Ethernet protocol.

44. (Currently Amended) An apparatus for handling a communication in a network **of nodes, each node having an associated identification that is unique from other identifications in the network of nodes**, the method comprising:

means for receiving, at a first node, a communication from a second node, wherein the communication includes an identification;

means for determining, at the first node, whether the identification included in the communication is closer to, equidistant from, or further from a predetermined **identification** value than an identification associated with the first node;

means for:

if the identification included in the communication is closer to the predetermined **identification** value than the identification associated with the first node, sending, from the first node to a third node, a communication including the identification **that was included in the communication received from the second node associated with the first node;**

if the identification included in the communication is further from the predetermined **identification** value than the identification associated with the first node,

sending, from the first node to a third node, a communication including the identification associated with the first node ~~that was included in the communication received from the second node~~; and

if the identification included in the communication is equidistant from the predetermined identification value as the identification associated with the first node, concluding that a loop exists in the network.